

ABSTRACT

The present invention includes a number of structural analogues of UK-1. A
comparision of the anticancer activity of the UK-1 analogues with their ability to inhibit
5 the growth of methicillin-sensitive and methicillin-resistant *Staphylococcus aureus*
demonstrates that a structurally simplified analogue of UK-1 retains the natural product's
selective activity against cancer cells. Structurally conservative changes to UK-1 that
diminish Mg^{2+} -binding ability may result in a dramatic decrease in cancer cell
cytotoxicity. The results may establish a minimum structural pharmacophore as well as a
10 functional role for Mg^{2+} -binding in the selective cytotoxicity of UK-1.

15

20